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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,739	03/26/2004	Venkatkrishna Raghavendran	22090-2	9701

7590 11/22/2006

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,739	RAGHAVENDRAN ET AL.	
	Examiner	Art Unit	
	Terressa M. Boykin	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacer. A drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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Response to Arguments:

Applicant's arguments with respect to claims 1 - 42 have been considered but are moot in view of the new ground(s) of rejection.

With regard to the obviousness-type double patenting rejection, applicants arguments that the claims are patentably distinct claims, albeit currently withdrawn, are not persuasive and terminal disclaimer is required if the claims of case 10696869 are not cancelled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 42 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5115077 see abstract, cols. 1-6, tables 10,13-16, 17, 19 and claims 7, 10-12,14-15,19,21,24-30,33.

The Examiner notes that applicants claimed composition sheet material, although containing a limiting oxygen index amount, remains broadly set forth. For example, the reference, which does have a limiting oxygen index which is within that as claimed, discloses a composite sheet material which is prepared from a polyether copolymer. The polyether copolymer has characteristics such as crystallizability, as well as excellent properties, such as resistance to heat and chemicals, a sufficiently high molecular weight, and a high mechanical strength which affords a excellent molding

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material to further process.

The thermoplastic polyester resins may include, polyethylene terephthalate, polypropylene terephthalate, polybutylene terephthalate, polyarylate, aromatic polyester, crystalline polyester etc. The polyether copolymer compositions may be used for molding into products in various forms and shapes so that the thermoplastic resins to be blended therewith may be appropriately chosen from various thermoplastic resins as long as they possess molecular weights in which they can be molded. The thermoplastic resins may be used singly or in combination with two or more as a polymer blend.

The composition was likewise measured for its heat distortion temperature and *critical oxygen index*. The results are shown in tables 1-13. The pelletized composition was then injection-molded to test pieces which in turn were measured for its heat distortion temperature (in accordance with ASTM D648) and for its critical oxygen index (in accordance with ASTM D286).

The polyether copolymer composition for the electrically conductive materials according to the reference may contain other components including an additive to be conventionally used for other polymers or resin compositions, such as *fiber reinforcing* material, e.g., glass fibers, carbon fibers or the like, inorganic or organic fillers, lubricating agents, lubricants, plasticizers, antioxidants, antistatic agents, heat stabilizers, weathering improving agents, colorants. Although the reference does not name the specific fiber based scrim as disclosed in claim 4, the reference does not limit or restrict the reinforced fibers to any given material but states that those fibers conventionally used for other polymers or resin compositions may be employed. This

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would thus include those as claimed by applicants since such materials are well known in the art.

As the polyether copolymer to be used for the insulating substrate, there may be used those described. As the glass fibers, there may be used various glass fibers which may be prepared from quartz glass, soda glass or the like. The kinds of the glass fibers and processes for the preparation thereof are not restricted to particular ones and they may include, for example, those prepared by the direct melt method or by the marble method. More specifically, the glass fibers are basically to be prepared by stretching the glass in a molten state and may be classified into long fibers and short fibers. The long fibers may be those prepared continuously from a nozzle made mainly of platinum, and the short fibers may be those called a so-called glass wool which is prepared by bursting molten glass out from small holes by means of centrifugal force or spraying burst gases or water vapor, thereby forming an aggregate body of fibers in a mat form.

The polyether copolymer was prepared in the same manner as in Example 1 and extrusion molded at 400.degree. C. into pellets which, in turn, were formed into a sheet having a thickness of 0.5 mm and each side of 50 mm, so as to allow the aromatic polyether copolymer in the insulating substrate to amount to the amount as shown in Table 15 below.

Between two sheets of the polyether copolymer was sandwiched a mat of long continuous glass fibers ("GSM, M9600"; Asahi Fiber Glass K.K.) so as to allow the amount of the glass fibers in the insulating substrate to amount to

that as shown in Table 15 below, thereby leading to a three-layer laminate.

The three-layer laminate was then heated at 400 °C. and transferred to a 50 mm. x 50 mm plate mold where the laminate was compressed at 6 kg/cm² for 5 minutes under heating. Thereafter, the laminate was transferred to a cooling press set at 250 °C. and caused to cool at 30 kg/cm² for 5 minutes, thus leading to a composite sheet having a film thickness of 1.1 mm as an insulating base.

The composition sheet material formed by the process as claimed would be anticipated by the reference. The process for blending or kneading the polyetheric copolymer with the thermoplastic resin and the filler are described therein above in the feature (17) of the reference.

Any properties or characteristics inherent in the prior art, e.g. porous, although unobserved, unmentioned or detected by the reference, would still anticipate the claimed invention. Note *In re Swinehart*, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things ". Nevertheless, the layers are non the less porous since the material or layers admit the passage of some oxygen gas through the pores or interstices.

In view of the above, there appears to be no significant difference between the reference and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5115077 see abstract, claims in view of JP 02-84565; or US 6565712; or USP 5316834 .

The reference **USP 5115077** discloses the use of reinforcing fibers prepared from those as claimed by applicants except for particular list as disclosed in claimed disclosed herein.

The polyether copolymer composition for the electrically conductive materials according to the reference may contain other components including an additive to be conventionally used for other polymers or resin compositions, such as *fiber reinforcing* material, e.g., glass fibers, carbon fibers or the like, inorganic or organic fillers, lubricating agents, lubricants, plasticizers, antioxidants, antistatic agents, heat stabilizers, weathering improving agents, colorants. Although the reference does not name the specific fiber based scrim as disclosed in claim 4, the reference does not limit or restrict the reinforced fibers to any given material but states that those fibers conventionally used for other polymers or resin compositions may be employed. This would thus include those as claimed by applicants since such materials are well known in the art. Nevertheless, fiber based scrim such as polyacrylonitrile, are known in the art.

for example in **JP 0294565** for their use as in moisture absorbing materials such as thermal wear fabrics etc. Further, the use of aramid fibers for their heat –resistant properties, such as used in tires or bullet proof vest is well known. The **US 6565712** relates to a composite composition to be used in a doctor blade construction. In particular, this invention relates to a composite composition used in a doctor blade construction wherein the composition has one or more inner layers comprising an engineering thermoplastic resin filled with heat-resistant, non-glass, long-strand fibers (e.g., carbon fibers or aramid fibers); one or more intermediate layers of carbon; and one or more outer layers of surface sheeting. Claim 3 discloses that the composite composition consists of heat resistant, non-glass, long strand fibers which are aramid fibers.

Note also **USP 5316834** discloses a sheet (a) in which a resin having a high limiting oxygen index is used as a matrix resin which constitutes the fiber -reinforced resin sheet, i.e. a polyphenylene sulfide sheet reinforced with a carbon fiber or a glass fiber. The matrix resin which constitutes the sheet is limited to specific resins. It is also known that generally usable matrix resins which constitute a fiber -reinforced resin sheet such as an unsaturated polyester resin, an epoxy resin, a nylon resin and a polycarbonate resin have a low limiting oxygen index.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any of the fiber based scrim as disclosed in claim 4 such as polyacrylonitrile for its moisture absorption properties, aramid fibers for their heat – resistant properties, polyphenylene sulfide when a matrix material is not desired but an advanced composition is still desired with high strength and thermal stability,...etc.

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Since such claimed fibers are not novel and very well-known for imparting various properties to the particular moiety and may be used at the discretion of the skilled artisan it would have been obvious choice depending on the desired characteristics of the resulting composition sheet. Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over

USP 5115077 see abstract, claims

With respect to the core layer being porous, any properties or characteristics inherent in the prior art, although unobserved, unmentioned or detected by the reference, would still anticipate or render obvious the claimed invention. Note In re Swinehart, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things ". Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the layers are non the less porous since the material or layers admit the passage of some oxygen gas

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through the pores or interstices. Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

Obviousness-type Double Patenting

Claims 1-42 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 41-42 (currently withdrawn) of copending Application No. **10/696869**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the composition sheet material as claimed is fully encompassed by the composition of the fiber reinforced laminate material of the multi-layered laminate.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

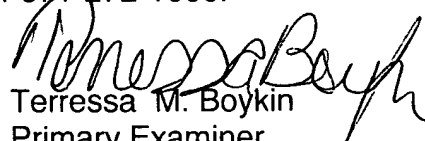
As noted above, applicants arguments that the claims are patentably distinct claims, albeit currently withdrawn, are not persuasive and terminal disclaimer is required if the claims of case 10696869 are not cancelled.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terressa M. Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday-Thursday 10-5:30 Friday (work at home).

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Terressa M. Boykin
Primary Examiner
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